

Application No.: 10/523227
Docket No.: CL2109USPCT

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Amendments to Claims

1. (currently amended) A process for the preparation of pentafluoroethane, comprising:

- (a) contacting a mixture comprising hydrogen fluoride and at least ~~one~~ one starting material selected from haloethanes of the formula CX_3CHX_2 and haloethenes of the formula $CX_2=CHX$, where each X is independently selected from the group consisting of F and Cl provided that no more than four of X are F, with a fluorination catalyst in a reaction zone to produce a product mixture comprising HF, HCl, pentafluoroethane, underfluorinated halogenated hydrocarbon intermediates and less than 0.2 mole percent chloropentafluoroethane based on the total moles of halogenated hydrocarbons in the product mixture;

wherein said fluorination catalyst comprises at least one chromium-containing component selected from (i) a crystalline cobalt-substituted alpha-chromium oxide where from about 0.05 atom % to about 6 atom % of the chromium atoms in the alpha-chromium oxide lattice are replaced by trivalent cobalt, and (ii) a fluorinated crystalline oxide of (i).

2. (original) The process of Claim 1 further comprising

- (b) separating the product of step (a) to recover CF_3CHF_2 as a product and to obtain underfluorinated halogenated hydrocarbon intermediates; and
(c) returning underfluorinated halogenated hydrocarbon intermediates obtained in step (b) back to the step (a) reaction zone;